What is claimed is:

1.　　A geodesic structure comprising a plurality of hub elements, each hub element having a vertex at a first end and a hub base at a second end that is opposite said first end, an angular deficit α, wherein said hub elements are randomly arranged adjacent to one another so as to form said geodesic structure.

2.　　The geodesic structure of **Claim 1**, wherein said hub element is a right cylindrical cone, and wherein, in an orthogonal elevational view of said hub element, said vertex connects a first hub side and a second hub side,

wherein an external angle θ is formed between said second hub side and a first imaginary line extending straight from said first hub side beyond said vertex, and

wherein an internal angle β is formed between a second imaginary line that extends vertically from said vertex toward said base and either one of said first hub side or said second hub side.

3.　　The geodesic structure of **Claim 2**,

wherein said geodesic structure has an angle of structure that is a function of said angular deficit α.

4.　　The geodesic structure of **Claim 3**, wherein said angle of structure is equal to an average value of said external angle θ of all said hub elements.

5.　　The geodesic structure of **Claim 4**, wherein said plurality of hub elements includes at least one group of elements that are identical in size and said angle of structure is equal to an average value of said external angle θ of all said hub elements.

6.　　The geodesic structure according to **Claim 4**, wherein said plurality of hub elements includes more than one group of hub elements and said hub elements within each group are identical in size, and wherein said angle of structure is equal

4 to an average value of said external angle θ of all of said hub elements in said

5 geodesic structure.

1 **7.** The geodesic structure according to **Claim 6**, wherein said plurality includes

2 two groups of hub elements and said hub elements are arranged in an alternating

3 pattern.

1 **8.** The geodesic structure according to **Claim 1** further comprising a virtual strut

2 having a strut length, said virtual strut extending as a straight line between any two

3 adjacent vertexes of said hub elements.

1 **9.** The geodesic structure according to **Claim 1**, wherein said structure is a

2 semi-spherical dome.

1 **10.** The geodesic structure according to **Claim 1**, wherein said structure is a

2 sphere.

1 **11.** The geodesic structure according to **Claim 1**, wherein said structure

2 represents a map of a spherical body.

1 **12.** The geodesic structure according to **Claim 11**, wherein said map is a globe.

1 **13.** The geodesic structure according to **Claim 12**, wherein said map is a flat,

2 two-dimensional representation of said spherical body.

1 **14.** The geodesic structure according to **Claim 1**, wherein said hub element is a

2 cone.

1 **15.** The geodesic structure according to **Claim 14**, wherein said cone is

2 fabricated of sheet material from the group consisting of metals, paper fiber

3 products, wood fiber products, plastics, woven materials, pressed materials, and

4 coated materials.

16.   The geodesic structure according to **Claim 15**, wherein said hub elements
are arranged in an overlapping fashion so as to provide a closed surface.

17.   The geodesic structure according to **Claim 1**, wherein said hub element is a
tensegrity element composed of a rigidly flexible compression component and a
tension component.

18.   The geodesic structure according to **Claim 17**, wherein said compression
component is a frame of rigidly flexible material, formed of two or more long slender
compression elements that are placed cross-wise over each other, with ends of said
compression elements extending outward, and said tension component is a chord
forming an outer perimeter of said tensegrity element and forcing said frame into a
convex-concave shape by applying a compression force on said ends of said
compression elements.

19.   The geodesic structure according to **Claim 18**, wherein said compression
component is formed of three long slender compression elements placed cross-wise
over each other so as to form a hexagonal shape.

20.   The geodesic structure according to **Claim 19**, wherein said ends of said
tensegrity element are connected to corresponding ends of adjacent tensegrity
elements.

21.   The geodesic structure according to **Claim 20** further comprising a skin that
covers said hub elements to form an enclosed space with said geodesic structure.

22.   The geodesic structure according to **Claim 1**, wherein said hub element is a
truncated cone

23.   The geodesic structure according to **Claim 1**, wherein said hub element is a
three-sided tapered hollow element.